AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (**Currently Amended**): A process for the blind demodulation of a linear-waveform source or transmitter in a system including one or more sources and an array of sensors and a propagation channel, said process comprising steps of:

determining symbol period T and taking samples at T_e, such that $T = lT_e$, wherein l is an integer number and T_e is the sampling period;

constructing a spatio-temporal observation vector z(t), the mixed sources of which are symbol trains from the transmitter, ~~from the~~ from observations ~~$x(kT_e)$;~~ $x(t_k)$ taken at times t_k, where the time t_k corresponds to kT_e where k is an integer;

applying an Independent Component Analysis (ICA) – type method ~~is applied~~ to the observation vector z(t) in order to estimate ~~the L_c~~ for a number of input symbol trains $\{a_{m-i}\}$ corresponding to a number of symbols L_c participating in an inter-symbol interference, the input symbol trains $\{a_{m-i}\}$ corresponding to observations i when the symbol m is non zero, the estimate outputs $\{\hat{a}_{m,j}\}$ being ~~that are~~ associated with the channel vectors ~~$\hat{h}_{z,j}=\hat{h}_z(k_j)$;~~ $\hat{h}_{z,j}=\hat{h}_z(k_j)$, z corresponding to a sensor in the array and j corresponding to a number of an estimate output;

arranging the L_c outputs $(\hat{a}_{m,j}, \hat{h}_{z,j})$ in the same order as the inputs $(a_{m-i}, h_z(i))$ so as to obtain the propagation channel vectors $\hat{h}_{z,j}=\hat{h}_z(k_j)$; and

determining ~~the phase~~ a phase α_{imax} associated with the outputs.

2. (**Currently Amended**): The process as claimed in claim 1, further comprising estimating propagation channel parameters in order to determine ~~the carrier~~ a carrier frequency so as to compensate for the symbol trains in order to obtain ~~them~~ the symbol trains in baseband.

3. (**Currently Amended**): The process as claimed in claim 1, further comprising a step of estimating ~~the angle~~ angle θ_p and delay τ_p parameters of the propagation channel.